

**ABSTRACT OF THE DISCLOSURE**

A semiconductor device is disclosed that performs fingerprint recognition on the electrostatic-capacity principle. A finger sweeping  
5 across a fingerprint recognition area of a semiconductor chip provides positive fingerprint recognition operations with improved reliability.

The semiconductor device includes the semiconductor chip having a sensor unit that  
10 performs fingerprint recognition, and a substrate having an opening formed in the position corresponding to the sensor unit. The semiconductor chip is flip chip bonded to the substrate such that the sensor unit corresponds to the opening, and  
15 except for the formed position of the opening, an under-fill material is provided between the semiconductor chip and the substrate.